



3.17 Delivering healthier diets and restoring degraded land through tree-based food production

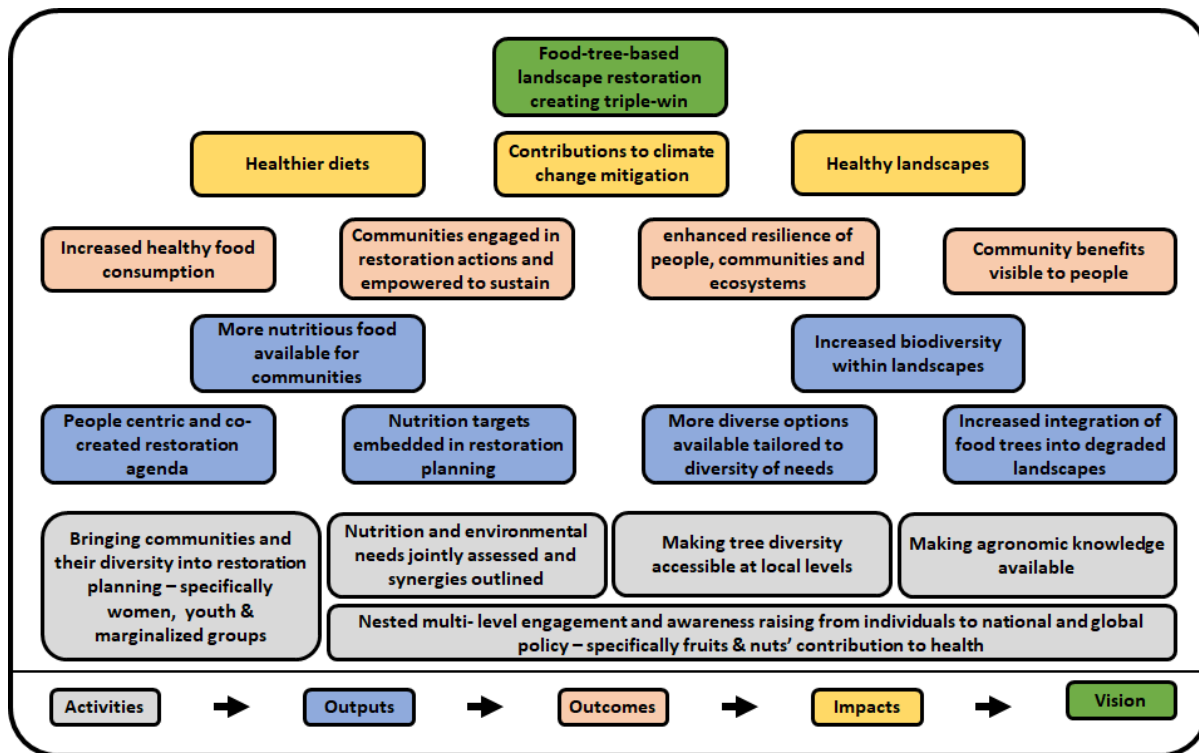
2.1 What, in brief, is the solution? Incorporating food trees with complementary crops into degraded landscapes to produce more nutrient-rich foods, restore degraded soils, and contribute to climate change mitigation.

2.2 What was/were the source(s) from which this solution emerged? This solution emerged from over a decade of consolidated research and engagement activities by World Agroforestry (ICRAF) and the Centre for International Forestry Research (CIFOR) scientists with a range of stakeholders from smallholder farmers to national governments across the Global South facing the challenges of food production and environmental degradation. Past research has highlighted the contributions and critical roles of trees within food systems for supporting availability and access to a greater diversity of nutritious foods.

2.3 What problem is it trying to address within food systems? The interconnectedness of the triple challenges of unhealthy diets, caused by both over- and under-nutrition, paired with losses of biodiversity and climate change. Tree based landscapes are ideally placed to serve these multiple purposes and support nutrition as well as livelihoods and well-being of the people that live in them.

2.4 Why is addressing that problem important for achieving the goal of your ACAI? Addressing the interconnectedness will advance the solutions as the distinct recognition will allow more holistic solutions and will avoid the common problem of trade-offs within the agri-food system - i.e. of fixing one problem while worsening the others.

2.5 How can this solution address that problem? Food tree-based landscape restoration will deliver the triple wins of healthier diets, healthier landscapes, and contribute to climate change mitigation. Supporting this process is a strong community based agenda setting that will allow people to engage and benefit directly from restoration and make it their own. The importance of fruit consumption for health is well known in the health and nutrition communities, but may be less appreciated by the general public. Awareness raising about the importance of consuming these nutrient-rich foods is required at all levels. We assume that once actors from national policy makers to individuals appreciate that consuming more fruits can decrease morbidity and mortality, there will be greater demand for fruits. We also assume that increased awareness about the benefits of trees for restoring soils and landscapes will incentivize people to plant more trees. Multi-level engagement will facilitate support mechanisms for nutrition sensitive restoration.



2.6 Why does this solution align to the definition and criteria for a ‘game changing solution’ developed by the Summit? Impact at scale: Over 20 million hectares of land have already been pledged for restoration; our solution would entail planting a portion of those hectares with food trees. The potential impacts could be enormous. IUCN has estimated that the potential benefits of restoration in general would bring \$84 billion per year in net benefits. Actionability: The iPES Food and supporting agencies are already committed to changing the food-system towards healthier diets. In addition, the agroecology movement has regained attention and support which would allow this holistic solution to fall on fertile ground and start from both these affiliated commitments. Sustainability: Solving the interconnectedness and avoiding slipping back on some targets while advancing the other targets will naturally create a cycle of progress which is self-enforcing and sustaining.

2.7 What is the existing evidence supporting the argument that this solution will work, or at least that it will achieve the initial outcomes described above? Food trees have the potential to enhance the resilience of food systems through direct provision of culturally acceptable nutrient-rich foods ([Vinceti et al. 2013](#)) while contributing to the sequestration of carbon in the soil and to the general maintenance and functioning of healthy ecosystems and biodiversity ([Jansen et al. 2020](#); [Rosenstock et al. 2019](#); [Kuyah et al. 2016](#)). Tree foods present rich nutrient sources of micronutrients and can be used to complement and diversify staple-based diets, contributing to diets and health ([Jamnadass et al. 2015](#)). When proper attention is given to the seasonality of production, portfolios of tree foods that support key micronutrient needs can be promoted for food supply resilience ([Davies et al. 2021](#); [McMullin et al. 2019](#)). Promoting agroforestry for fruit production and soil health, amongst other innovations has been suggested as a key policy option for healthy diets and environmental sustainability ([Pedersen et al. 2020](#)).

2.8 What is the current and/or likely political support for this idea? Trees are part of the solution towards supporting the delivery of diverse and nutritious diets and embody core principles of sustainable food systems outlined by iPES Food such as diversity, multi-functionality and resilience, and align with agroecological approaches to food production. The Bonn Challenge subscribers would also likely support this solution to integrate productive restoration - focusing on food and landscape functionality for



delivering more nutritious food for achieving the global goal to restore 500 million hectares of degraded and deforested landscapes by 2030. In line with the CFS Voluntary Guidelines on Food Systems and Nutrition, this solution supports a number of guidelines including those specified on protecting, conserving and sustainably using biodiversity for food and agriculture to strengthen the resilience of food systems; supporting food producers in the production of diverse food that contributes to healthy diets, while ensuring a decent income, livelihoods and resilience, this makes specific mention of agroforestry, amongst others; and invest in knowledge transfer and innovation for producing diversified nutritious foods, such as fruits and vegetables, of which the majority of fruits are sourced from trees. The European Green Deal and its farm-to-fork strategy also indicate potential support from the EU.

2.9 Are there certain contexts for which this solution is particularly well suited, or, conversely, contexts for which it is not well-suited at all? This solution is suitable for delivering sustainable actions to respond to the food and nutrition challenges faced in many tropical countries, across multiple scales. The role of trees in delivering across multiple sustainability dimensions such as health, environment, socio-cultural, can be adapted and customized to different landscapes to ensure healthier diets are available, culturally acceptable to communities, while supporting biodiversity and ecosystem functions. This solution is not well suited to oceans but is relevant to coastal landscapes where mangroves support important environmental and livelihood functions, and where degradation of these systems undermine and impact on those not directly engaged. Extremely arid landscapes are not optimally suited, yet with initiatives such as the Great Green Wall - restoring and re-enforcing the Sahel with the ambition of 8,000Km of trees, offers an entry point for this solution. Such initiatives are already tackling the challenge of environmental degradation and the impacts on the livelihoods and well-being of the millions of people affected across this landscape.

2.10 Who are the key stakeholders to be further involved in the process of developing and refining the solution idea? The key is to have a mix of partners from various backgrounds across agriculture, forestry, nutrition and land use planning. This involves those who make decisions and who implement actions on the ground. The local contextualization will ultimately involve local communities that will co-develop and fine-tune the solution. In the frame of the UNFSS, there is the potential to synergize with the priority areas of Action Track 1 - Ensure access to safe and nutritious food for all.